



# Aplikacje desktopowe z PyQt



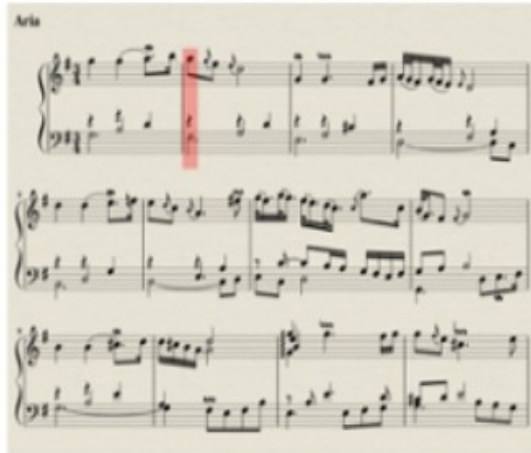
# Go to jest Qt?



## MuseScore Sheet Music

MuseScore BVBA

Windows, OSX, Ubuntu, Android, iOS



Recently showcased applications:







# Qt w Pythonie?

[News](#)[Software ▾](#)[3rd Party Software ▾](#)[Support ▾](#)[Commercial ▾](#)

## What is PyQt?



PyQt is a set of Python v2 and v3 bindings for [The Qt Company's](#) Qt application framework and runs on all platforms supported by Qt including Windows, MacOS/X and Linux. PyQt5 supports Qt v5. PyQt4 supports Qt v4 and will build against Qt v5. The bindings are implemented as a set of Python modules and contain over 1,000 classes.

### Recent news

[pyqtdeploy v1.1 Released](#)[PyQt v5.5 Released](#)[SIP v4.16.9 Released](#)[PyQt v5.4.2 Released](#)[PyQt v4.11.4](#)

### Downloads

[PyQt4](#)[PyQt5](#)[QScintilla2](#)[SIP](#)

The Qt Company have announced that support for Qt v4 will cease at the end of 2015. PyQt5 and Qt v5 are strongly recommended for all new development.

PyQt is dual licensed on all supported platforms under the GNU GPL v3 and the Riverbank Commercial License. Unlike Qt, PyQt is not available under the LGPL. You can purchase the commercial version of PyQt [here](#). More information about licensing can be found in the [License FAQ](#).

PyQt does not include a copy of Qt. You must obtain a correctly licensed copy of Qt yourself. However, a binary Windows installers of the GPL version of both PyQt5 and PyQt4 are provided and this includes a copy of the LGPL version of Qt.

## PyQt Components

A description of the components of PyQt5 can be found in the [PyQt5 Reference Guide](#).

A description of the components of PyQt4 can be found in the [PyQt4 Reference Guide](#).

# Na co to komu?

Zbrojownia Albionu

Przymierzalnia Statystyki sprzętu

Wybór sprzętu

Wyszuk. Ulepsz.

Hełm: Brak 0 0 max

Naramiennik: Brak 0 0 max

Napiersznik: Brak 0 0 max

Tarcza: Brak 0 0 max

Nagolennik: Brak 0 0 max

Buty: Cizemki 5 10 max

Broń: Brak 0 0 max

Amulet: Brak

Koń: Brak Max

Poziom: Włochrabiła

Profesja: Narbonus

Ilość Wychowanków: 3

Wywary procent: 3

Oleje sp. procent: 5

Bazowy Atak: 160

Bazowa Obrona: 160

Wynikowe statystyki

☐ Szczegóły

NARBONUS  
WŁOCHRABIA  
Atak max + ole  
Atak max: 128  
Atak -10%: 115  
Atak -20%: 96  
Obrona max: 2  
Obrona z podatk  
Obrona max, h

testowy Zapisz zmiany Usuń

QYolk

QYolk: Browsing all installed cheeseshop packages

All Packages Active Not Active

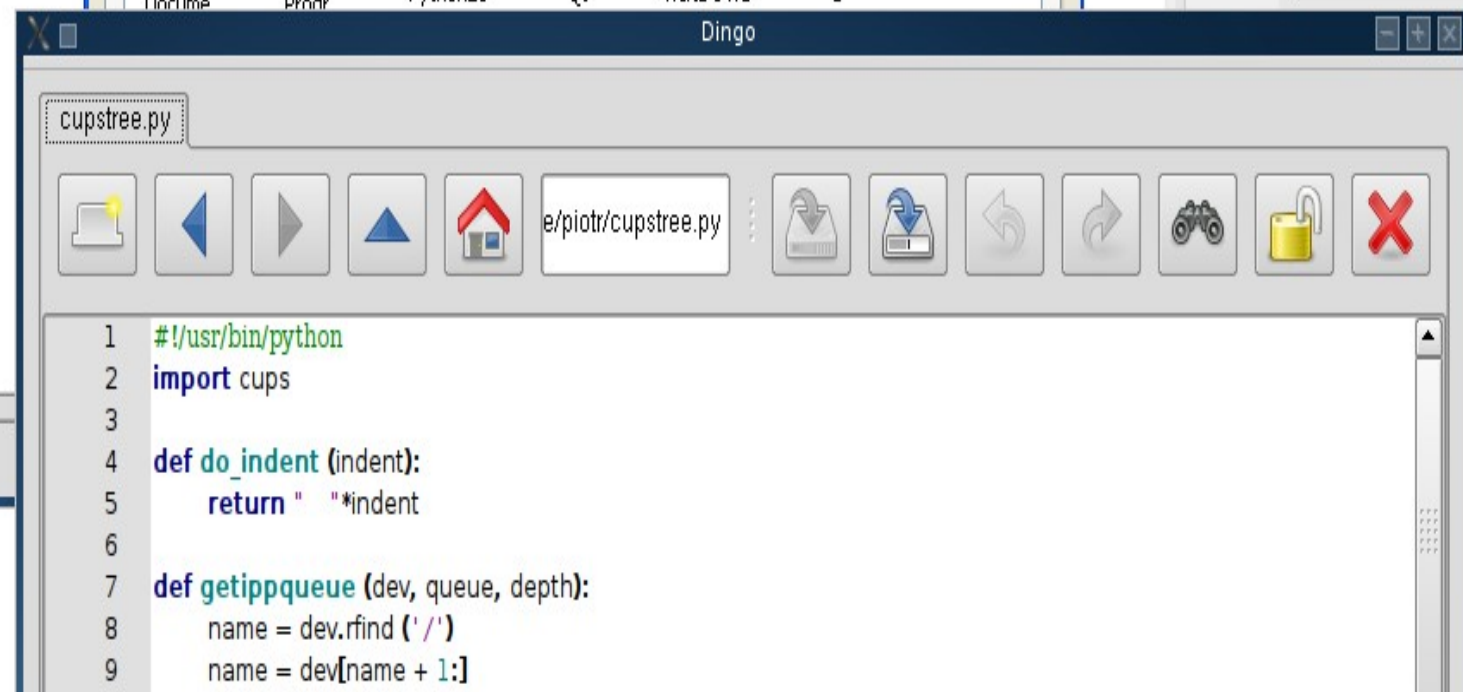
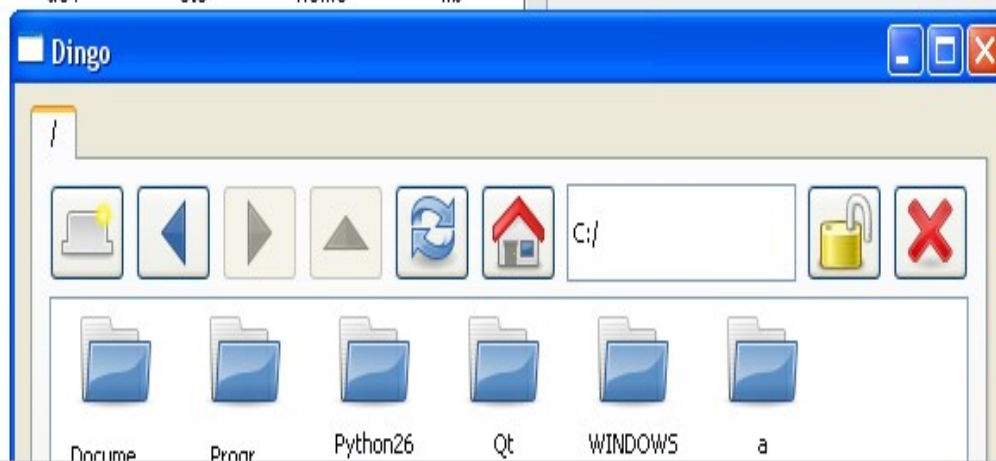
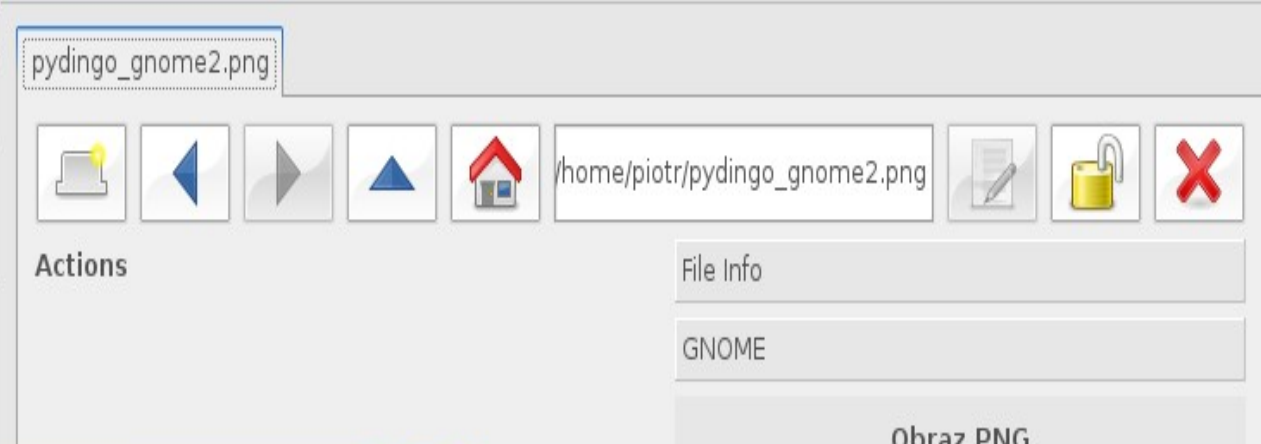
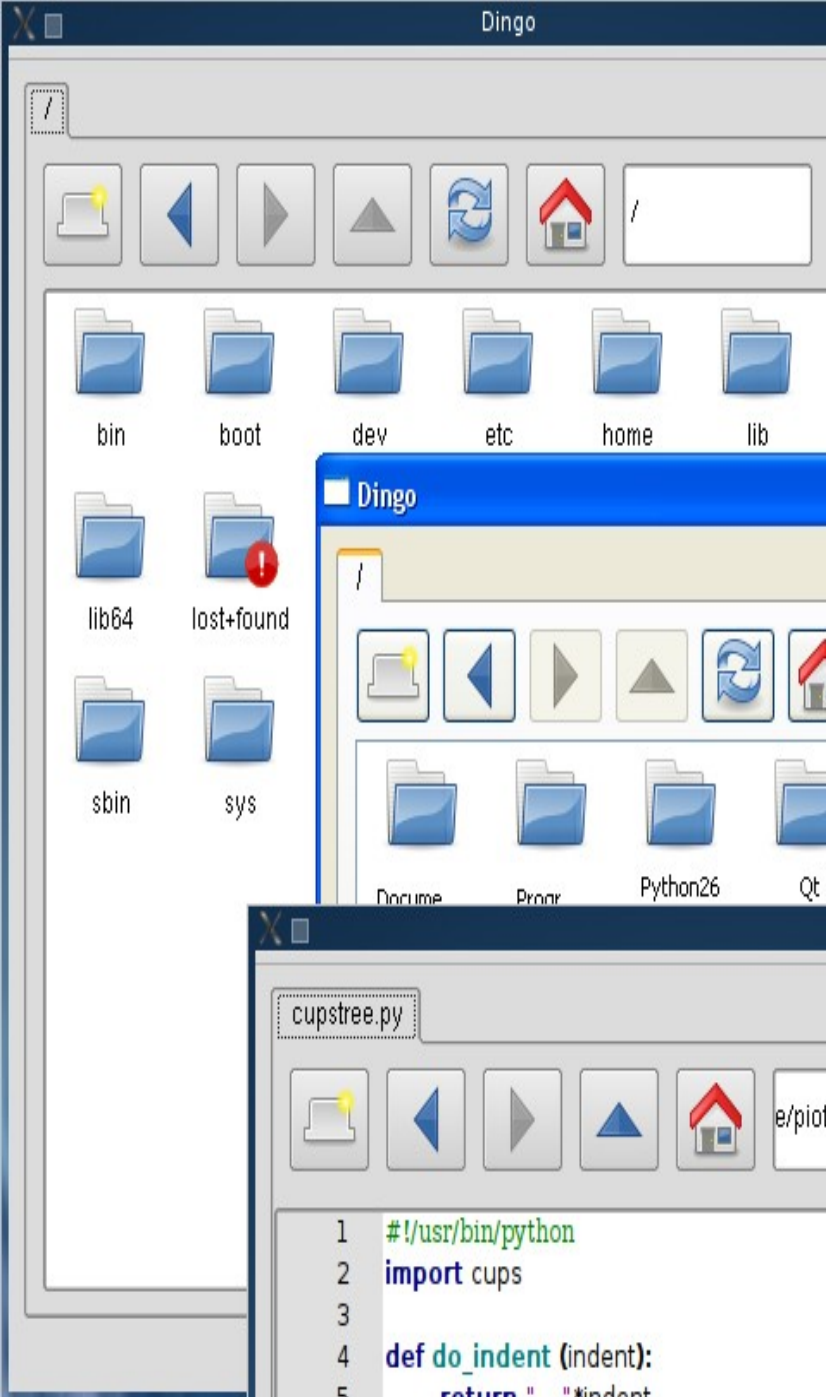
Package Name	Version	Status
AuthKit	0.2.4a	Not Active
AuthKit	0.3.0pre3dev-r51	Active
Beaker	0.6.2	Not Active
Beaker	0.6.3	Active
Cheetah	1.0	Active
DecoratorTools	1.4	Not Active
DecoratorTools	1.4	Not Active
DecoratorTools	1.4	Active
DecoratorTools	1.4	Active
Elixir	0.3.0	Active
FormEncode	0.6	Not Active
FormEncode	0.7.1	Active
Genshi	0.3.6	Active
Mako	0.1.1	Not Active
Mako	0.1.5	Active
MySQL-python	1.2.2	Active
Myghty	1.1	Active
MyghtyUtils	0.52	Active
Paste	1.1.1	Not Active
Paste	1.3	Active
PasteDeploy	1.1	Not Active

run.py

Use-Case: Brightness Hotkeys Don't Work

- Hotkeys for brightness up/down don't work
- Check one: Is there any driver support?
- Check two: Does it work when directly talking to the driver's interface?
- Check three: Which events are being reported, which events are missing?

SUSE

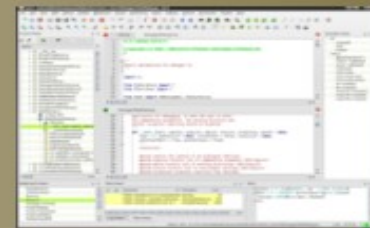


- File Info
- GNOME
- Obraz PNG
- image  
png
- Przeglądarka obrazów
- KolourPaint
- KIconEdit
- Okular
- showFoto
- Gwenviiew
- Image Manipulation Program





# The Eric Python IDE



[python-projects.org](http://python-projects.org)

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## What is Eric?

Eric is a full featured Python and Ruby editor and IDE, written in python. It is based on the cross platform Qt gui toolkit, integrating the highly flexible Scintilla editor control. It is designed to be usable as everyday's quick and dirty editor as well as being usable as a professional project management tool integrating many advanced features Python offers the professional coder. eric includes a plugin system, which allows easy extension of the IDE functionality with plugins downloadable from the net.

Current stable version is eric6 based on PyQt5/4 (with Qt5/4) and Python 3 or Python 2.

## Features

- ☒ Unlimited number of editors
- ☒ Configurable window layout
- ☒ Configurable syntax highlighting
- ☒ Sourcecode autocompletion
- ☒ Sourcecode calltips
- ☒ Sourcecode folding
- ☒ Brace matching
- ☒ Error highlighting
- ☒ Advanced search functionality including project wide search and replace
- ☒ Integrated class browser
- ☒ Integrated version control interface for CVS, Subversion and Mercurial repositories (as plugins)
- ☒ Integrated cooperation functions (chat, shared editor)
- ☒ Integrated sourcecode documentation system
- ☒ Integrated python debugger including support to debug multithreaded and multiprocessing applications
- ☒ Integrated, full featured Ruby debugger
- ☒ Integrated profiling and code coverage support
- ☒ Integrated automatic code checkers (syntax, errors and style [PEP-8])
- ☒ Integrated task (todo items) management
- ☒ Advanced project management facilities
- ☒ Interactive Python shell including syntax highlighting and autocompletion
- ☒ Interactive Ruby shell including syntax highlighting and autocompletion
- ☒ Application diagrams
- ☒ Running external applications from within the IDE
- ☒ Integrated unittest support
- ☒ Integrated CORBA support based on omniORB
- ☒ Integrated rope refactoring tool (as optional plugin)
- ☒ Integrated interface to cx\_freeze (as optional plugin)
- ☒ Integrated interface to PyLint (as optional plugin)
- ☒ Many integrated wizards for regex and Qt dialogs (as plugins)
- ☒ Localizations. Currently Eric is available in English, German, French, Russian, Czech, Spanish, Italian, Turkish and Chinese.
- ☒ Tools for previewing Qt forms and translations
- ☒ Integrated web browser
- ☒ Integrated interface to the enchant spell checking library

<http://pl.pycon.org/2015/agenda.html>

# PyCon **PI**'15

Ossa/k Rawy Mazowieckiej  
15-18 października

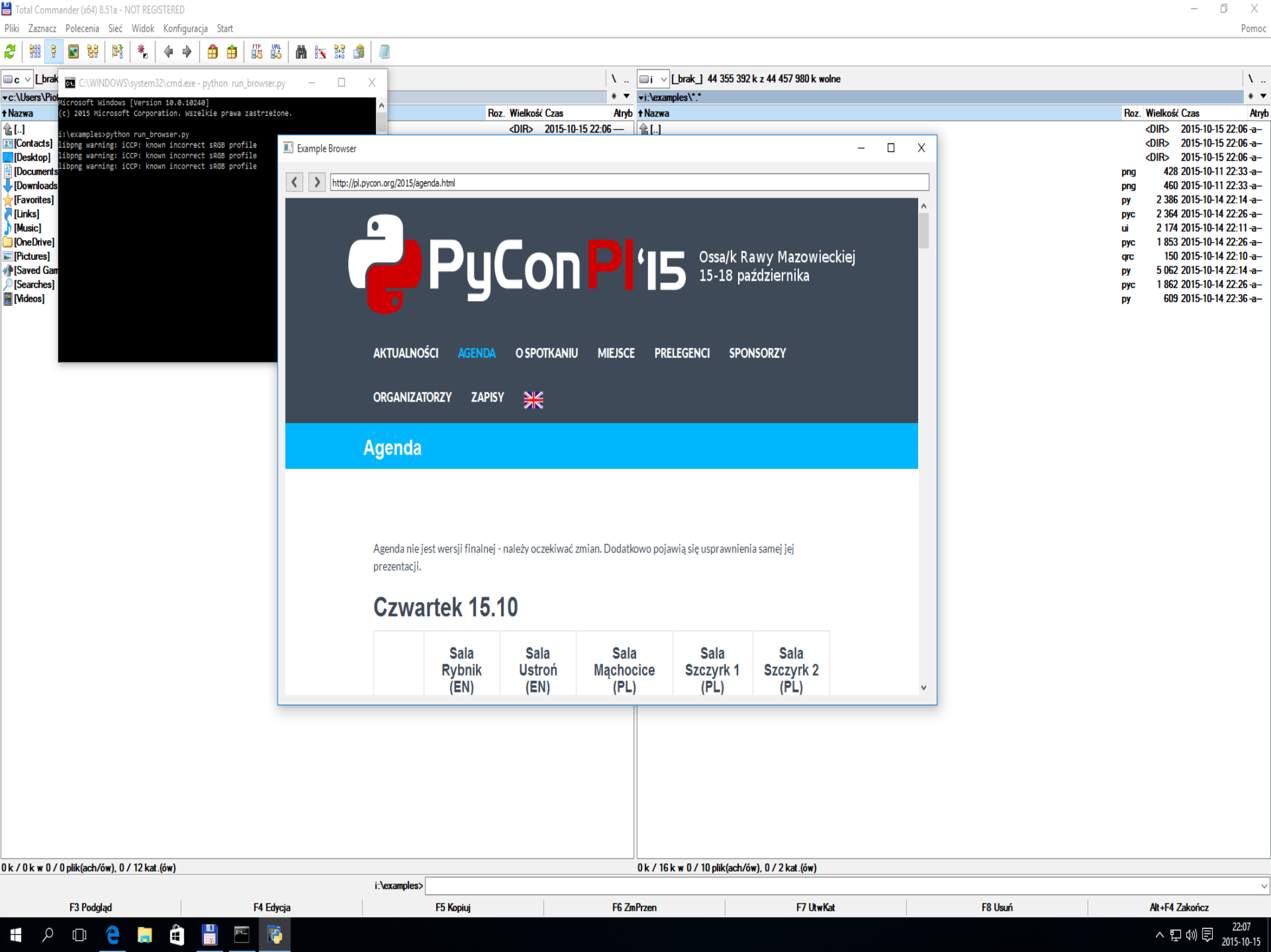
[AKTUALNOŚCI](#)[AGENDA](#)[O SPOTKANIU](#)[MIEJSCE](#)[PRELEGENCI](#)[SPONSORZY](#)[ORGANIZATORZY](#)[ZAPISY](#)

## Agenda

Agenda nie jest wersji finalnej - należy oczekiwać zmian. Dodatkowo pojawią się usprawnienia samej jej prezentacji.

### Czwartek 15.10

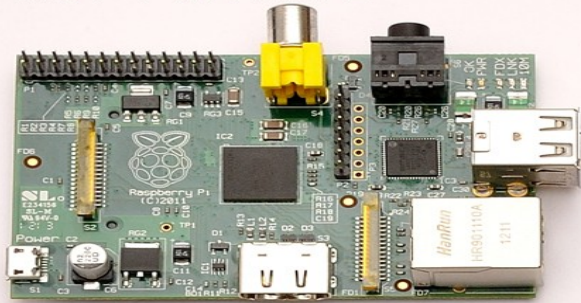
	Sala Rybnik (EN)	Sala Ustroń (EN)	Sala Mąchocice (PL)	Sala Szczyrk 1 (PL)	Sala Szczyrk 2 (PL)



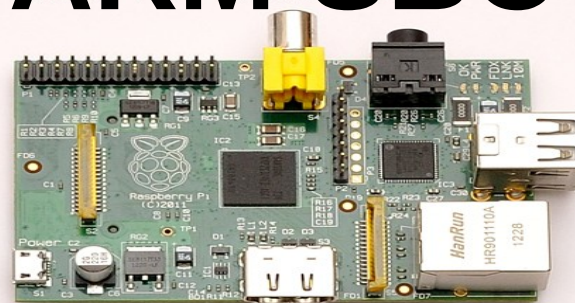


# ARM SBC

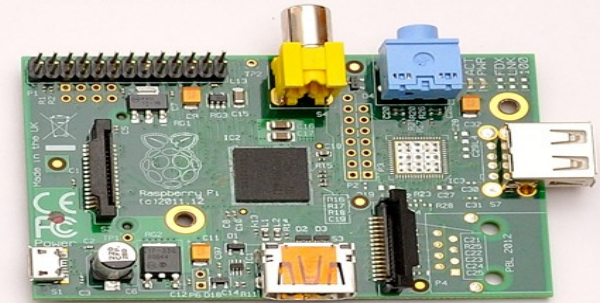
Rev 1 model B



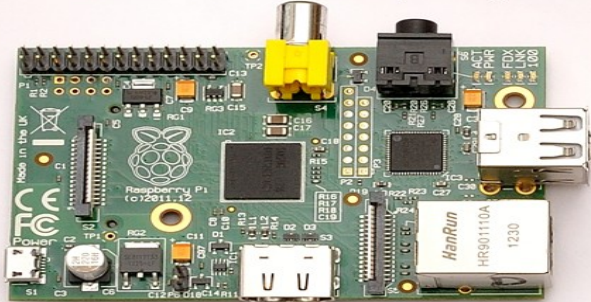
Rev 1 B with links



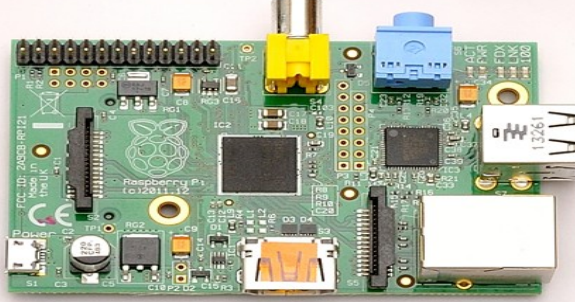
Model A



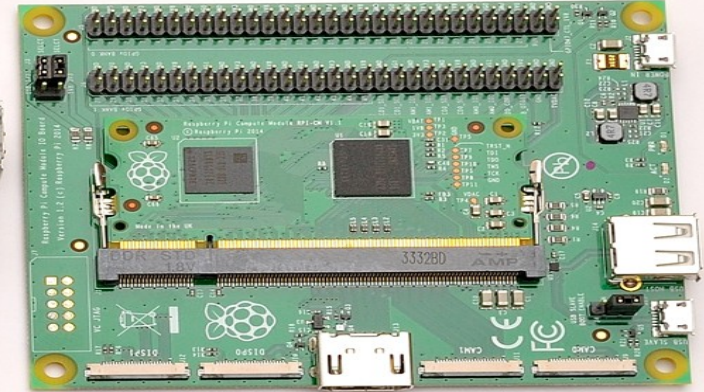
Rev 2 model B (China)



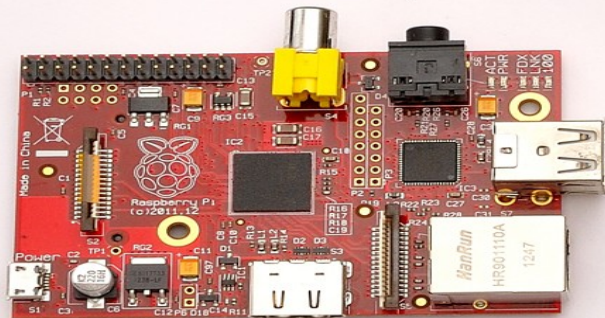
Rev 2 model B (UK)



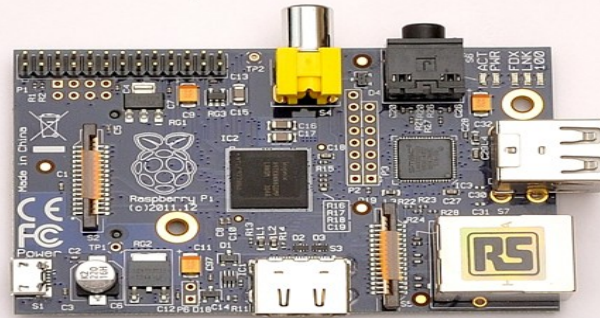
Compute Module



Chinese Red Pi, Rev 2 model B



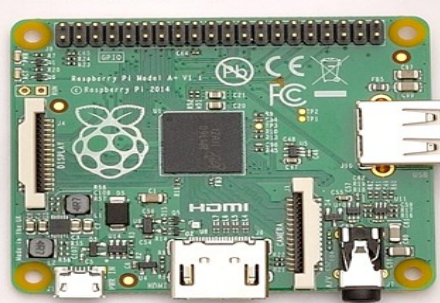
Blue Pi, Rev 2 model B



Model B+



Model A+



**RasPi.TV**

# mobile

[http://modrana.org/pyconpl2013/python\\_and\\_qt\\_for\\_android.pdf](http://modrana.org/pyconpl2013/python_and_qt_for_android.pdf)

Android

Blackberry


Sailfish, Maemo, MeGoo, Mer

Tablety z MS Windows x86

pyqtdeploy



## QYolk - Python Manager

Filter: All Packages  ☐ EGGs only Quit

Package	Release
wsgiref	0.1.2
setuptools	0.6c9
Python	2.5.4

## Package Information

**Name:** Python**License:** PSF license**Author:** Guido van Rossum and the Python community**Home-page:** <http://www.python.org/2.5>**Summary:** A high-level object-oriented programming language**Platform:** Many**Version:** 2.5.4**Classifier:** Topic :: Software Development**Author-email:** [python-dev@python.org](mailto:python-dev@python.org)**Description:**

Python is an interpreted, interactive, object-oriented programming language. It is often compared to Tcl, Perl, Scheme or Java.

Python combines remarkable power with very clear syntax. It has

 Stop



Linux

Windows

Instalacja

OSX

Jak tworzy się aplikacje PyQt?



# PyQt Class Reference

Portions of this documentation have been adapted from the documentation provided with Qt 4.8.7. This document is not an official document from The Qt Company, but is provided with The Qt Company's permission.

Because this is based on the Qt C++ documentation it still contains C++ code fragments, broken links etc. These will be fixed in future releases.

<b>A</b> <a href="#">QAbstractAnimation</a>	<a href="#">QFont</a>	<a href="#">QNetworkConfiguration</a>	<a href="#">QStyleOptionSlider</a>
<a href="#">QAbstractButton</a>	<a href="#">QFontComboBox</a>	<a href="#">QNetworkConfigurationManager</a>	<a href="#">QStyleOptionSpinBox</a>
<a href="#">QAbstractEventDispatcher</a>	<a href="#">QFontDatabase</a>	<a href="#">QNetworkCookie</a>	<a href="#">QStyleOptionTab</a>
<a href="#">QAbstractExtensionFactory</a>	<a href="#">QFontDialog</a>	<a href="#">QNetworkCookieJar</a>	<a href="#">QStyleOptionTabBarBase</a>
<a href="#">QAbstractExtensionManager</a>	<a href="#">QFontInfo</a>	<a href="#">QNetworkDiskCache</a>	<a href="#">QStyleOptionTabBarBaseV2</a>
<a href="#">QAbstractFileEngine</a>	<a href="#">QFontMetrics</a>	<a href="#">QNetworkInterface</a>	<a href="#">QStyleOptionTabV2</a>
<a href="#">QAbstractFileEngineHandler</a>	<a href="#">QFontMetricsF</a>	<a href="#">QNetworkProxy</a>	<a href="#">QStyleOptionTabV3</a>
<a href="#">QAbstractFileEngineIterator</a>	<a href="#">QFormBuilder</a>	<a href="#">QNetworkProxyFactory</a>	<a href="#">QStyleOptionTabWidgetFrame</a>
<a href="#">QAbstractFormBuilder</a>	<a href="#">QFormLayout</a>	<a href="#">QNetworkProxyQuery</a>	<a href="#">QStyleOptionTabWidgetFrameV2</a>
<a href="#">QAbstractGraphicsShapeItem</a>	<a href="#">QFrame</a>	<a href="#">QNetworkReply</a>	<a href="#">QStyleOptionTitleBar</a>
<a href="#">QAbstractItemDelegate</a>	<a href="#">QFSFileEngine</a>	<a href="#">QNetworkRequest</a>	<a href="#">QStyleOptionToolBar</a>
<a href="#">QAbstractItemModel</a>	<a href="#">QFtp</a>	<a href="#">QNetworkSession</a>	<a href="#">QStyleOptionToolBox</a>
<a href="#">QAbstractItemView</a>	<b>G</b> <a href="#">QGenericArgument</a>	<b>O</b> <a href="#">QObject</a>	<a href="#">QStyleOptionToolBoxV2</a>
<a href="#">QAbstractListModel</a>	<a href="#">QGenericReturnArgument</a>	<a href="#">QObjectCleanupHandler</a>	<a href="#">QStyleOptionToolButton</a>
<a href="#">QAbstractMessageHandler</a>	<a href="#">QGesture</a>	<b>P</b> <a href="#">QPageSetupDialog</a>	<a href="#">QStyleOptionViewItem</a>
<a href="#">QAbstractNetworkCache</a>	<a href="#">QGestureEvent</a>	<a href="#">QPaintDevice</a>	<a href="#">QStyleOptionViewItemV2</a>
<a href="#">QAbstractPrintDialog</a>	<a href="#">QGestureRecognizer</a>	<a href="#">QPaintEngine</a>	<a href="#">QStyleOptionViewItemV3</a>
<a href="#">QAbstractProxyModel</a>	<a href="#">QGL</a>	<a href="#">QPaintEngineState</a>	<a href="#">QStyleOptionViewItemV4</a>
<a href="#">QAbstractScrollArea</a>	<a href="#">QGLBuffer</a>	<a href="#">QPainter</a>	<a href="#">QStylePainter</a>
<a href="#">QAbstractSlider</a>	<a href="#">QGLColormap</a>	<a href="#">QPainterPath</a>	<a href="#">QSvgGenerator</a>
<a href="#">QAbstractSocket</a>	<a href="#">QGLContext</a>	<a href="#">QPainterPathStroker</a>	<a href="#">QSvgRenderer</a>
<a href="#">QAbstractSpinBox</a>	<a href="#">QGLFormat</a>	<a href="#">QPaintEvent</a>	<a href="#">QSvgWidget</a>
<a href="#">QAbstractState</a>	<a href="#">QGLFramebufferObject</a>	<a href="#">QPalette</a>	<a href="#">QSwipeGesture</a>
<a href="#">QAbstractTableModel</a>	<a href="#">QGLFramebufferObjectFormat</a>	<a href="#">QPanGesture</a>	<a href="#">QSyntaxHighlighter</a>
<a href="#">QAbstractTextDocumentLayout</a>	<a href="#">QGLPixelBuffer</a>	<a href="#">QParallelAnimationGroup</a>	<a href="#">QSysInfo</a>
<a href="#">QAbstractTransition</a>	<a href="#">QGLShader</a>	<a href="#">QPauseAnimation</a>	<a href="#">QSystemLocale</a>
<a href="#">QAbstractUriResolver</a>	<a href="#">QGLShaderProgram</a>	<a href="#">QPen</a>	<a href="#">QSystemSemaphore</a>
<a href="#">QAbstractVideoBuffer</a>	<a href="#">QGLWidget</a>	<a href="#">QPersistentModelIndex</a>	<a href="#">QSystemTrayIcon</a>
<a href="#">QAbstractVideoSurface</a>	<a href="#">QGlyphRun</a>	<a href="#">Phonon</a>	<b>T</b> <a href="#">Qt</a>
<a href="#">QAbstractXmlNodeModel</a>	<a href="#">QGradient</a>	<a href="#">QPicture</a>	<a href="#">QTabBar</a>





## Panel widżetów

Filter

## Layouts

- Vertical Layout
- Horizontal Layout
- Grid Layout
- Form Layout

## Spacers

- Horizontal Spacer
- Vertical Spacer

## Buttons

- OK Push Button
- Tool Button
- Radio Button
- Check Box
- Command Link Button
- Button Box

## Item Views (Model-Based)

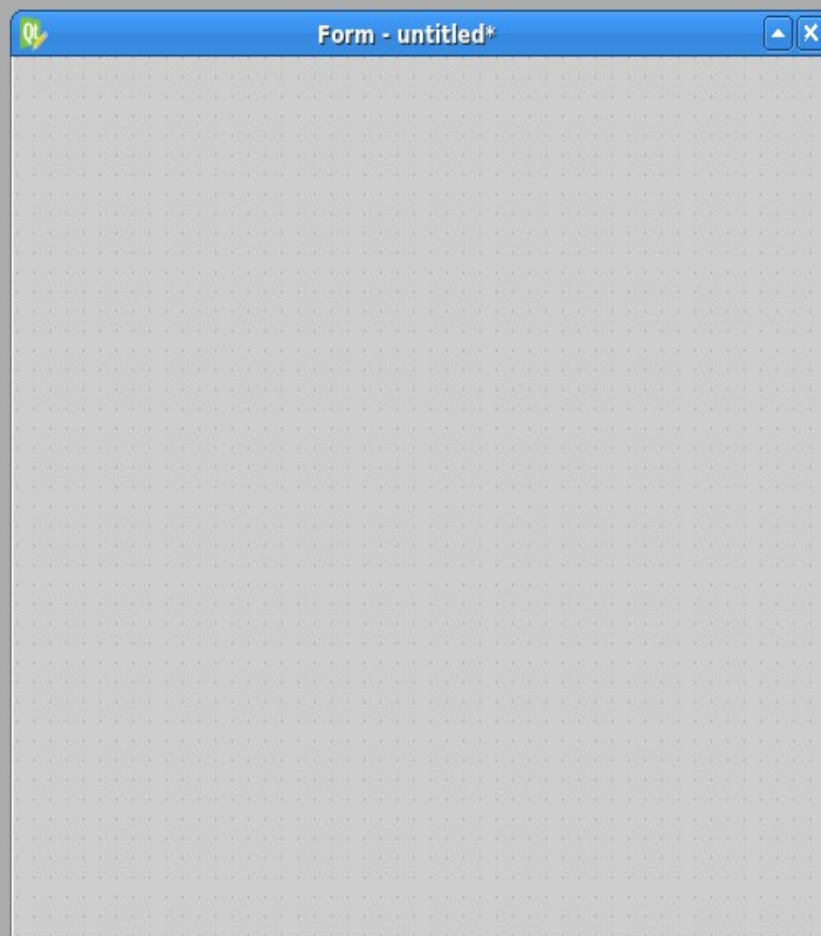
- List View
- Tree View
- Table View
- Column View

## Item Widgets (Item-Based)

- List Widget
- Tree Widget
- Table Widget

## Containers

- Group Box
- Scroll Area
- Tool Box
- Tab Widget



## Hierarchia obiektów

Obiekt	Klasa
Form	QWidget

## Edytor właściwości

Filter

## Form : QWidget

Właściwość	Wartość
▼ QObject	
objectName	Form
▼ QWidget	
enabled	<input checked="" type="checkbox"/>
▶ geometry	[(0, 0), 492 x 451]
▶ sizePolicy	[Preferred, Preferred, ...]
▶ minimumSize	0 x 0
▶ maximumSize	16777215 x 16777215

## Przeglądarka zasobów



Filter

&lt;resource root&gt;

Plik Edycja Formularz Widok Ustawienia Okno Pomoc



## Panel widżetów



Filter

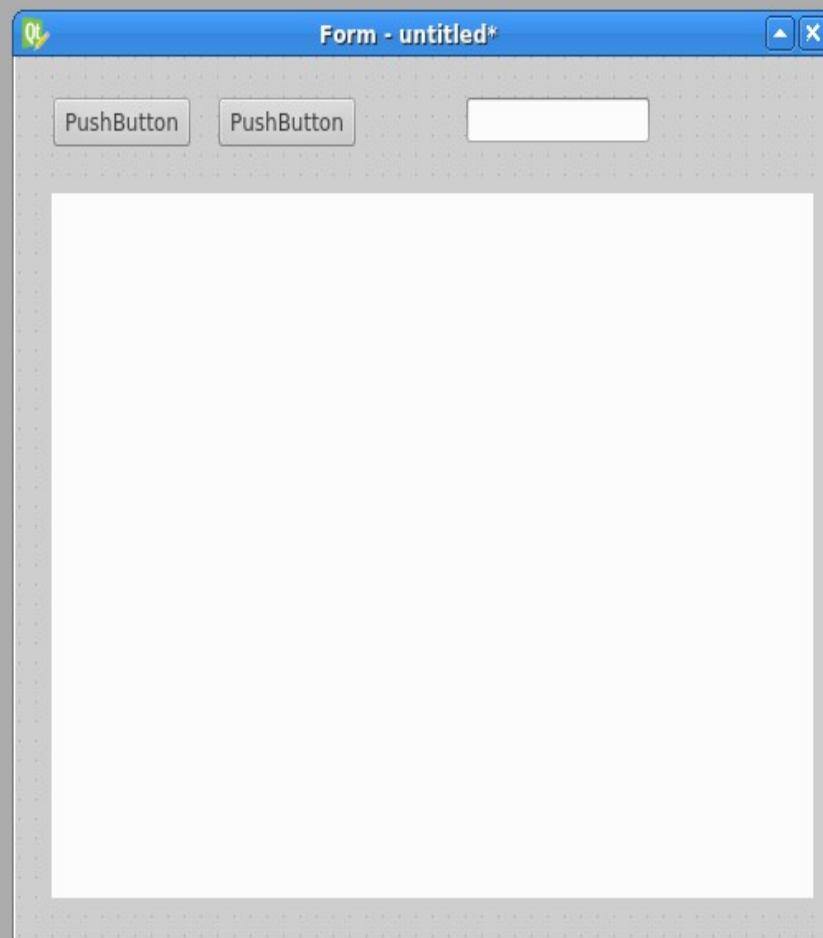
- Tab widget
- Stacked Widget
- Frame
- Widget
- MdiArea
- Dock Widget

## Input Widgets

- Combo Box
- Font Combo Box
- Line Edit
- Text Edit
- Plain Text Edit
- Spin Box
- Double Spin Box
- Time Edit
- Date Edit
- Date/Time Edit
- Dial
- Horizontal Scroll Bar
- Vertical Scroll Bar
- Horizontal Slider
- Vertical Slider
- Key sequence Edit

## Display Widgets

- Label
- Text Browser
- Graphics View
- Calendar



## Hierarchia obiektów



Obiekt	Klasa
Form	QWidget
li...it	QLineEdit
p...n	QPushButton
p...2	QPushButton
w...w	QWebView

## Edytor właściwości



Filter



## Form : QWidget

Właściwość	Wartość
QObject	
objectName	Form
QWidget	
enabled	<input checked="" type="checkbox"/>
geometry	[(0, 0), 492 x 451]
sizePolicy	[Preferred, Preferred,...]
minimumSize	0 x 0
maximumSize	16777215 x 16777215

## Przeglądarka zasobów



Filter

&lt;resource root&gt;

Edytor sygnałów/... Edyt... Przeglądarka za...

Plik Edycja Formularz Widok Ustawienia Okno Pomoc



## Panel widżetów



Filter

- Tab widget
- Stacked Widget
- Frame
- Widget
- MdiArea
- Dock Widget

## Input Widgets

- Combo Box
- Font Combo Box
- Line Edit
- Text Edit
- Plain Text Edit
- Spin Box
- Double Spin Box
- Time Edit
- Date Edit
- Date/Time Edit
- Dial
- Horizontal Scroll Bar
- Vertical Scroll Bar
- Horizontal Slider
- Vertical Slider
- Key sequence Edit

## Display Widgets

- Label
- Text Browser
- Graphics View
- Calendar



## Hierarchia obiektów



Obiekt	Klasa
Form	QWidget
...	QHBoxLayout
...	QLineEdit
...	QPushButton
...	QPushButton
W...W	QWebView

## Edytor właściwości



Filter



## Form : QWidget

Właściwość	Wartość
QObject	
objectName	Form
QWidget	
enabled	<input checked="" type="checkbox"/>
▶ geometry	[(0, 0), 492 x 451]
▶ sizePolicy	[Preferred, Preferred,...]
▶ minimumSize	0 x 0
▶ maximumSize	16777215 x 16777215

## Przeglądarka zasobów



Filter

&lt;resource root&gt;

Edytor sygnałów/...

Edyt...

Przeglądarka za...



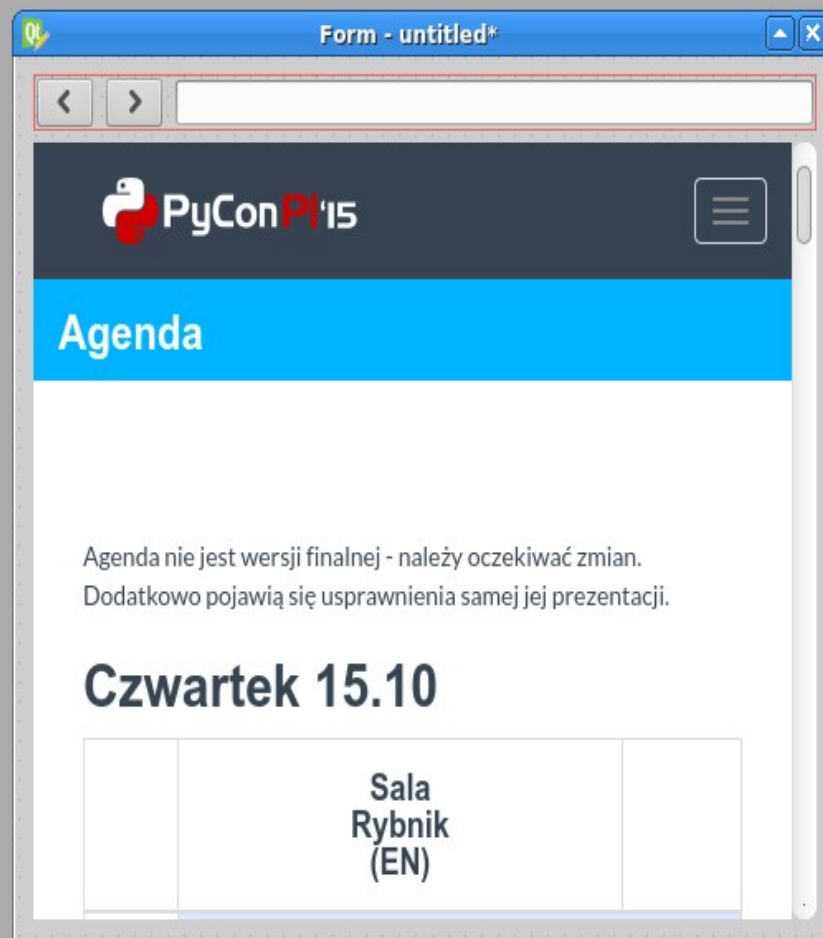
Plik Edycja Formularz Widok Ustawienia Okno Pomoc



Panel widżetów

Filter

- Tab widget
- Stacked Widget
- Frame
- Widget
- MdiArea
- Dock Widget
- Input Widgets
  - Combo Box
  - Font Combo Box
  - Line Edit
  - Text Edit
  - Plain Text Edit
  - Spin Box
  - Double Spin Box
  - Time Edit
  - Date Edit
  - Date/Time Edit
  - Dial
  - Horizontal Scroll Bar
  - Vertical Scroll Bar
  - Horizontal Slider
  - Vertical Slider
  - Key sequence Edit
- Display Widgets
  - Label
  - Text Browser
  - Graphics View
  - Calendar



Hierarchia obiektów

Obiekt	Klasa
Form	QWidget
...	QHBoxLayout
...	QLineEdit
...	QPushButton
...	QPushButton
W...W	QWebView

Edytor właściwości

Filter

Form : QWidget

Właściwość	Wartość
statusTip	
whatsThis	
accessibleName	
accessibleDescrip...	
layoutDirection	LeftToRight
autoFillBackground	<input type="checkbox"/>
styleSheet	

Przeglądarka zasobów

Filter

<resource root>

Edytor sygnałów/slotów

Edytor akcji

Przeglądarka zasobów



AKTUALNOŚCI **AGENDA** O SPOTKANIU MIEJSCE PRELEGENCI SPONSORZY ORGANIZATORZY ZAPISY 

## Agenda

Agenda nie jest wersji finalnej - należy oczekiwać zmian. Dodatkowo pojawią się usprawnienia samej jej prezentacji.

### Czwartek 15.10

	Sala Rybnik (EN)	Sala Ustroń (EN)	Sala Machocice (PL)	Sala Szczyrk (PL)	
14:00	Rejestracja Opcjonalny obiad				
15:00	Rejestracja				
16:00	Otwarcie				
16:30	L. van Houtven Object capability security				
17:30	R. Dopieralski Why do you need a code review	Z. Hemel Navigating the Docker	D. Śmigiel HowTo re	Sz. Pyżalski Python niesekwencyjny	

### Główni sponsorzy



# Narzędzia

pyuic

pyrcc

pylupdate

# Kod szkieletowy

```
import sys
```

```
from PyQt5 import QtWidgets
```

```
import browser as ui
```

```
class MyBrowserApplication(QtWidgets.QWidget):
```

```
    def __init__(self, parent=None):
```

```
        QtWidgets.QWidget.__init__(self, parent)
```

```
        self.ui = ui.Ui_Browser()
```

```
        self.ui.setupUi(self)
```

```
if __name__ == "__main__":
```

```
    app = QtWidgets.QApplication(sys.argv)
```

```
    myapp = MyBrowserApplication()
```

```
    myapp.show()
```

```
    sys.exit(app.exec_())
```



# Sygnał i slot

```
class MyBrowserApplication(QtWidgets.QWidget):
    def __init__(self, parent=None):
        QtWidgets.QWidget.__init__(self, parent)
        self.ui = ui.Ui_Browser()
        self.ui.setupUi(self)
        self.ui.urlBar.returnPressed.connect(self._load_page)

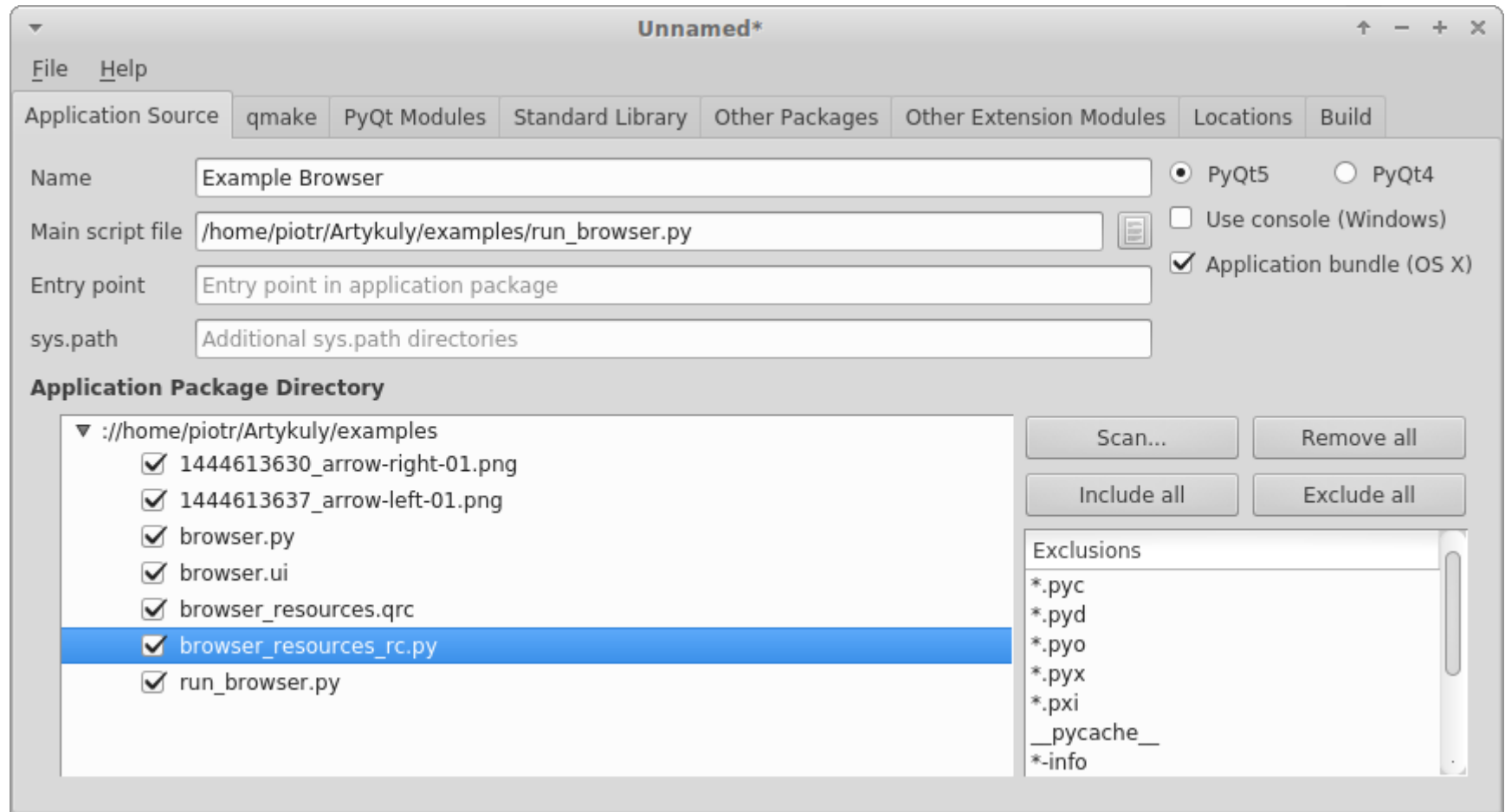
    def _load_page(self):
        url = QtCore.QUrl(self.ui.urlBar.text())
        self.ui.webView.setUrl(url)

if __name__ == "__main__":
    app = QtWidgets.QApplication(sys.argv)
    myapp = MyBrowserApplication()
    myapp.show()
    sys.exit(app.exec_())
```

# Budowanie

py2exe

py2app



# Książki, zasoby

Rapid GUI Programming with Python and Qt

<http://www.qtrac.eu/pyqtbook.html>

GUI Programming with Python: QT Edition

<https://www.commandprompt.com/community/pyqt/>

PyQt

<https://riverbankcomputing.com/software/pyqt/intro>

PySide

<http://pyside.github.io>

Dokumentacja

<http://pyqt.sourceforge.net/Docs/PyQt5/>

# Konkurencja





Pytania?